

ABSTRACT

The present invention provides a waveguide for the TM mode having a simpler configuration. The waveguide has: a pair of main ground electrodes (2a) and (2b) disposed so as to face each other in parallel with each other with a dielectric block (4) in between; and a pair of side walls (3a) and (3b), each constructed of a plurality of sub ground electrodes (11) provided between the pair of main ground electrodes (2a) and (2b), the sub ground electrodes (11) stacked in parallel with the main ground electrodes (2a) and (2b) with a interval along a direction orthogonal to the main ground electrodes (2a) and (2b). Electromagnetic waves in the TM mode may propagate in a region (5) surrounded by the pair of main ground electrodes (2a) and (2b) and the pair of side walls (3a) and (3b).